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/Sarah K. Varner/
Sarah K. Varner

July 7, 2008
Date

Attorney Docket No. YAMAP0997US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicants: Michiyo YANASE et al. : Group Art Unit: 1652
: :
Serial No.: 10/560,491 : Examiner: Tekchand Saidha
: :
Filed: December 12, 2005 :
Title: **A METHOD FOR IMPROVING THE THERMOSTABILITY OF α -GLUCAN
PHOSPHORYLASE (GP)**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Sir:

This paper is responsive to the Office Action mailed April 4, 2008, in the application noted above. A request for a two month extension of time is filed herewith.

The Examiner has restricted the claims in the present application under 35 U.S.C. §121 as follows:

Group I: Claims 1-19, 34, drawn to a modified plant α -glucan phosphorylase having improved thermostability obtained from 15 α -glucan phosphorylase sequences and having 4 distinct motif sequences.

- Group II: Claims 20-27, drawn to a method of producing a modified plant α -glucan phosphorylase having improved thermostability obtained from among 15 α -glucan phosphorylase encoding sequences and having 4 distinct motif sequences.
- Group III: Claims 28-30, drawn to a method of synthesizing a α -glucan, using the modified plant α -glucan phosphorylase having improved thermostability obtained from 15 α -glucan phosphorylase sequences and having 4 distinct motif sequences.
- Group IV: Claims 35 and 40, drawn to a modified α -glucan phosphorylase having improved thermostability, wherein amino acid residues are different from that of the natural α -glucan phosphorylase in at least one position selected from phenylalanine at position 39 (F39), asparagine at position 135 (N135), and threonine at position 706 (T706) of SEQ ID NO: 2.
- Group V: Claim 36, drawn to a method of producing α -glucan phosphorylase by modifying a nucleic acid in order that mutant α -glucan phosphorylase is modified at a position selected from phenylalanine at position 39 (F39), asparagine at position 135 (N135), and threonine at position 706 (T706) of SEQ ID NO: 2.
- Group VI: Claims 37-39, drawn to a method of synthesizing a glucan by reacting phosphorylase of claim 35.

In response to the restriction requirement, Applicants elect Group I including claims 1-19.

For Group I, Applicants are required to elect one α -glucan phosphorylase sequence from the following: SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28 and 30. Applicants elect SEQ ID No 2.

Applicants are further required to elect one motif sequence from the following: motif sequence 1L, 1H, 2, 3L and 3H. Applicants elect motif sequence 3 L.

If there are any additional fees, they can be charged to Deposit Account No. 18-0988 (Docket No. YAMAP0997US). Any overpayment can be credited to Deposit Account No. 18-0988.

Respectfully submitted,

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